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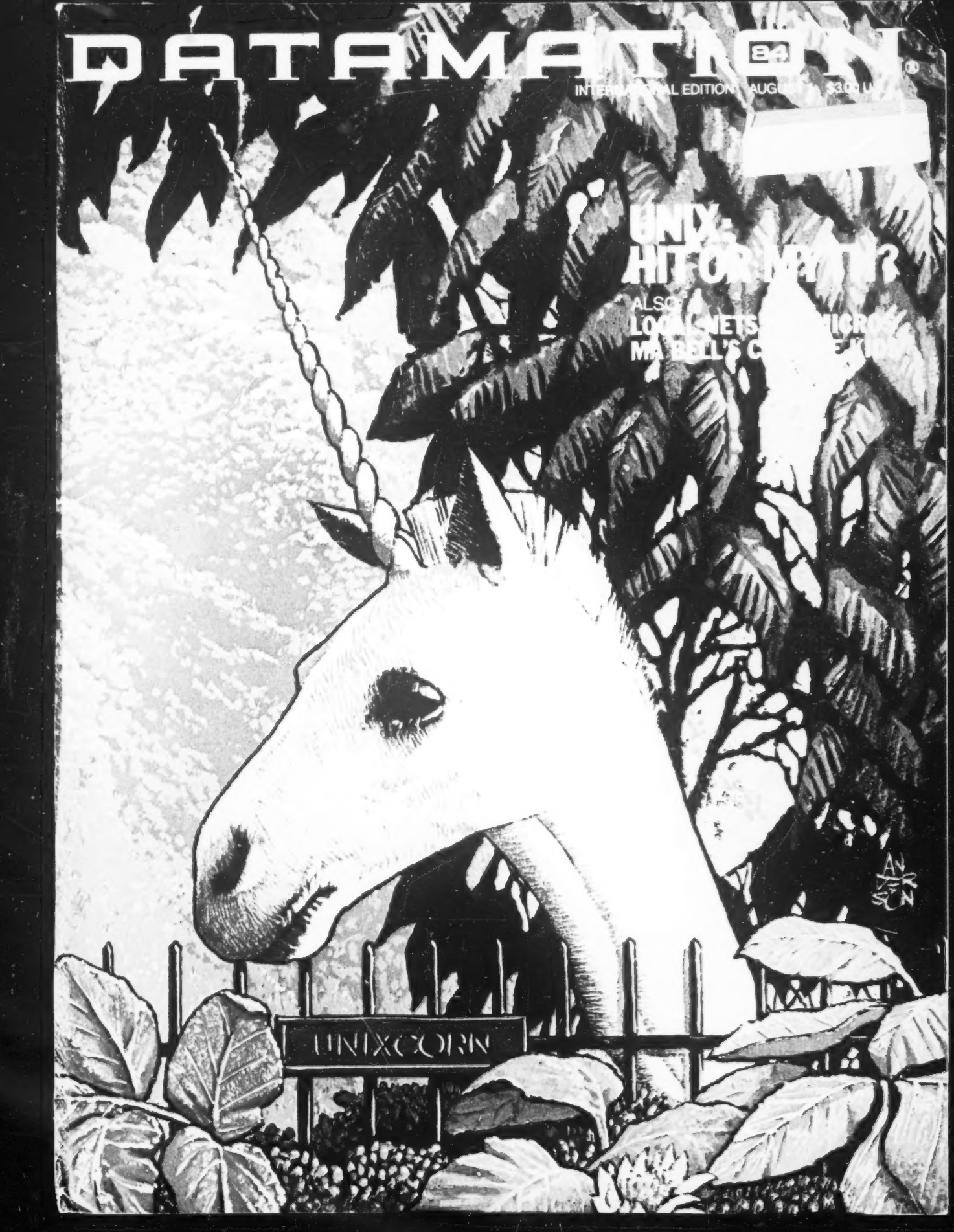

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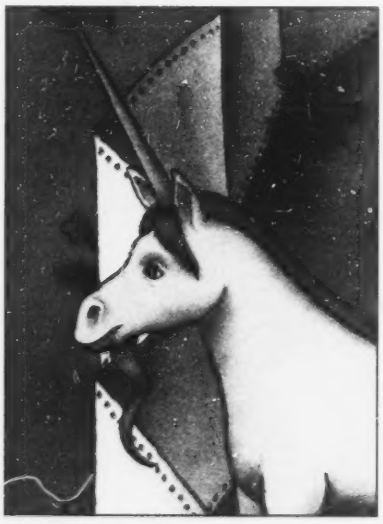

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COVER ILLUSTRATION
BY RICHARD ANDERSON

IBM is the monarch in DATAMATION's ranking of the rulers.

CROWNING EUROPE'S DP ROYALTY

The kings of European data processing saw their empires grow again during 1983, as Europe's dp business continued to shake off the vestiges of recession. The combined revenues in accounting currencies of the DATAMATION Top 25 dp companies in Europe rose a royal 11%, indicating a welcome restoration of strong growth rates after the industry's low point in 1980. Much of this revenue increase is due to a real expansion in the dp business and is not just a result of company mergers and acquisitions—a major factor in the previous year's growth.

That expansion benefited almost every sector of the industry, particularly the telecommunications, software and services, and microcomputer segments. The European business micro market was indeed booming, with shipments worth some $1.7 billion and sales up 52%. This majestic rise of the micro in Europe, however, is not overtly reflected in this year's ranking. The mainframe, minicomputer, and business systems suppliers still dominate in the European dp domain. The signs of change are there, nevertheless. The strongest contender in the European microcomputer market is Apple, which pulled in $137 million in European dp revenue last year.

Predictably, IBM remains the undisputed sovereign of European dp, and its power and influence across the Continent is steadily increasing. Far below IBM, the other members of Europe's dp aristocracy are still battling it out.

Since last year's survey, nine companies have moved up the Top 25 list, while four have slid down. Mergers at France's Bull group helped push the company into the number two spot, despite a $95 million loss last year. Since electronic typewriter sales are now excluded from dp revenues, 1982's top European-owned company, Olivetti, fell to fourth place. French telecom firm CIT Alcatel and West German office equipment supplier Triumph-Adler dropped off the 1983 table completely. The two firms were replaced by the new information technology company formed by Thorn-EMI in the U.K., and Amdahl. The latter reentered the rankings after a year's absence.

The general growth in revenues last year reflects the increasing attention European governments and businesses are paying to data processing. Many Europeans view information technology products as strategic tools that can increase productivity, open up new markets, and encourage economic recovery. Last year, productivity indicators did indeed swing upward in Europe, while interest rates stayed stable at around 8%.

There were still a number of black spots. European unemployment levels remained high and the strong dollar continued to erode the weaker European currencies, although this erosion was less severe than in 1982. Worst hit was Sweden, where the krone dropped 18% against the dollar. The French franc fell 14%, followed by the British pound, which plummeted 14%, and the Italian lire, which was off 11% versus the dollar. The Dutch and West German currencies fared better, with declines of 6% and 5%, respectively. Even though the currency slide seems to be slowing down, it was still bad news for the U.S. companies doing business in Europe. It also took the edge off the results of European companies that had significantly stronger gains in local currencies than in dollars.

Much of Europe's own dp nobility reported sharp rises in revenues and profits in local currencies. Their dollar share of the combined Top 25 dp revenues slipped to 32% last year from 34% in 1982. That loss of domestic market share by European-based companies is about par for the course, according to Morris English, head of the information unit of the Information Technologies Task Force at the European Commission in Brussels. English estimates that Europe had a trade deficit in dp products of some $1.7 billion in 1983. European companies control less than 40% of their home markets, says English, and around 70% of European dp production comes from non-European firms. On a world scale, the situation is equally disturbing. Europe represents just under 30% of the international market for information technology products, yet European-owned firms control only 15% of world markets and this is slipping at the rate of 1% a year.

IBM UPS MARKET SHARE

Back home, IBM is not only seven times bigger than its nearest rival but the blue-blooded giant is gradually increasing its market share. In Europe, IBM once again rang up 10% more sales than the previous year, increasing its slice of the Top 25's total revenues. The company's European sales in 1983 represent 42% of the total $25.6 billion earned by all 25 companies. This compares with 40% in 1982 and 38% in 1981. IBM's increased presence in Europe cannot simply be attributed to the trend by buyers to turn to reliable and established names in troubled financial times. It is also a reflection of how the American company's tactical change over the last couple of years, from cautious ruler to industrial warlord, has paid off handsomely.

The exclusion of electronic typewriters from dp revenues for last year hardly affects IBM, whose estimated $85 million dollar typewriter revenue in Europe is only 0.7% of its total sales. Olivetti, however, which brought in $186 million from typewriter sales, was pushed down two places. Triumph-Adler, which entered the survey ranks in 1982 on the strength of its increased office systems and electronic typewriter business, was eliminated from the Top 25 because of the typewriter exclusion.

Three other companies fell in the 1983 ranking. ITT nosedived four rungs, while both Sperry and Control Data plummeted three places. On the way up the Top 25 ladder were Hewlett-Packard, Wang, and Ferranti—all vaulting three places. The new French Bull group moved up two notches, as did Dutch giant Philips. Inching up one rung were Nixdorf, Honeywell Information Systems, Rank Xerox, and Kienzle.

Another year of dollar dominance has made it necessary to show the highest growth rates of the DATAMATION Top 25 in both dollars (Fig. 1) and accounting currencies (Fig. 2) to give a fair indication of company performance. Amdahl's massive 40% growth in European revenues puts the pcm at the top of the dollar table. Wang captures the number two slot with a 28% sales hike.

When measured in accounting currencies, Amdahl slips to number two behind Sweden's Ericsson, which holds on to first place again this year. The Scandinavian champion is still growing fast, with 1983 sales up an impressive 42%. Meanwhile, Wang dropped to sixth place, below three of Europe's own best performers—Bull and Thomson-CSF from France, and the newly formed thorn-emi (Information Technology) in the U.K.

Seventeen companies in the 1983 ranking showed growth gains on both the dollar and accounting currency tables, in contrast to only 13 in 1982.

There are 12 European companies on the main Top 25 table, one less than the previous year. Britain claims the greatest number of these with four companies, followed by West Germany with three, France with two, and one each for Italy, Sweden, and the Netherlands.

This year, DATAMATION has expanded the table of the top European owned companies. What this shows is that the Continent's software and services companies, especially the French firms, are rapidly gaining in size and strength. Six software companies, along with Triumph-Adler and Racal from the U.K., now fall just below the $163 million revenue cutoff point for the Top 25.

FIG. 1

TOP REVENUE GROWTH RATES IN U.S. $

RANK 1983	RANK 1982	DP % GROWTH RATE*
1 Amdahl	NM	40
2 Wang	4	28
3 Hewlett-Packard	7	18
4 Ericsson Infor. Systems	1	16
5 Nixdorf	6	16
6 Thorn EMI	NM	16
7 Bull		15
8 Thomson-CSF	NM	14
9 Kienzle	NM	13
10 IBM	8	10

*European revenue, FY 1983
NM: not meaningful

FIG. 2

TOP REVENUE GROWTH RATES IN ACTUAL ACCOUNTING CURRENCIES

RANK 1983	RANK 1982	DP % GROWTH RATE*
1 Ericsson Infor. Systems	1	42
2 Amdahl	NM	40
3 Bull	NM	33
4 Thomson-CSF	NM	32
5 Thorn EMI	NM	29
6 Wang	5	28
7 Nixdorf	4	22
8 Hewlett-Packard	10	18
9 Kienzle	8	18
10 ICL	NM	18

*European revenue, FY 1983
NM: not meaningful

FIG. 3

EUROPE'S TOP 20*

	COUNTRY	DP REVENUE IN $MIL.
1 Bull	France	1,378
2 Siemens	W. Germany	1,376
3 Olivetti	Italy	1,305
4 ICL	U. K.	1,016
5 Nixdorf	W. Germany	922
6 Philips	Netherlands	858
7 Thomson-CSF	France	341
8 Ericsson Infor. Systems	Sweden	334
9 Kienzle	W. Germany	278
10 Thorn EMI	U. K.	215
11 Ferranti	U. K.	203
12 Plessey	U. K.	177
13 CISI	France	150
14 SG2	France	142
15 Cap Gemini Sogeti	France	133
16 Triumph Adler	W. Germany	131
17 GSI	France	127
18 Finsiel	Italy	126
19 Scicon	U. K.	123
20 Racal	U. K.	112

*Companies owned and headquartered in Europe

CISI AIMS AT U.S. MARKET

At number 13 on the Top 20 European-owned table is French software company CISI, an offshoot of the French Atomic Energy Agency. The company posted a 5% increase in European revenue to $150 million last year. Around 80% of this revenue comes from France, although like many of Europe's software firms it is trying to establish itself across the Atlantic. CISI has already set up its own operation in the U.S. and in 1983 it branched out into economic information systems with the acquisition of Wharton Econometrics Forecast Associates Inc.

France's Société Générale de Service et de Gestion (SG2), captures the 12th position with revenues of $142 million in 1983. This software firm also gets the bulk (85%) of its business from its French home market. Italy is also a strong earner for SG2, which has a broad customer base covering Africa, Asia, and South America. SG2's main markets are in financial systems, videotex, and networking. Last year it became a member of a development team for one of the projects of the European Commission's European Strategic Program for Research & Development in Information Technologies (Esprit). The effort is designed to set up a Europe-wide packet switching network for information exchange between local networks.

Ranking 15th is the third of France's top software companies, Cap Gemini Sogeti, which boosted its revenues to $133 million. That increase represents a growth of 11% in dollars and a substantial 29% in French francs. CGS began the year by acquiring another French software

DATAMATION'S EUROPEAN TOP 25

1983 RANK	COMPANY	1982 RANK	PARENT COMPANY HQ	EUROPEAN DP REV. CAL. YR. 1983 (IN $ MIL.)	% CHANGE EUROPEAN DP REV. FY 1982/3 (IN $)	% CHANGE EUROPEAN DP REV. FY 1982/3 (IN ACCOUNTING CURRENCIES)	DP REV. DOMESTIC (PARENT CO.) FY 1983 (IN $ MIL.)
1	IBM[1,2]	1	U.S.	10,758	+10.4	+10.4	23,127
2	Bull	4	France	1,378	+14.3	+33.1	*
3	Siemens	3	W. Germany	1,376	+10.0	+17.0	*
4	Olivetti	2	Italy	1,305	NM	NM	573
5	Digital	5	U.S.	1,107	+ 6.9	+ 6.9	2,770
6	ICL	6	U.K.	1,016	+ 2.2	+18.2	776
7	Burroughs[3]	7	U.S.	977	+ 0.7	+ 0.7	2,623
8	Nixdorf	9	W. Germany	922	+15.8	+21.6	516
9	Philips[1]	11	Netherlands	858	+ 9.0	+16.0	*
10	Hewlett Packard	13	U.S.	814	+18.4	+18.4	1,419
11	Sperry	8	U.S.	705	- 7.2	- 7.2	*
12	NCR	12	U.S.	683	- 2.7	- 2.7	*
13	Control Data	10	U.S.	617	-22.3	-22.3	2,900
14	Honeywell[1]	15	U.S.	484	+ 1.3	+ 1.3	1,235
15	Wang	18	U.S.	346	+27.5	+27.5	1,103
16	Thompson-CSF	16	France	341	+14.0	+32.1	*
17	Ericsson Infor Systems	17	Sweden	334	+16.4	+42.2	128
18	Kienzle	19	W. Germany	278	+12.6	+18.3	*
19	Thorn EMI	NM	U.K.	215	+15.9	+29.1	166
20	Rank Xerox[1]	21	U.S.	206	- 2.4	- 2.4	*
21	Ferranti	24	U.K.	203	- 2.5	+11.3	173
22	Amdahl	NM	U.S.	181	+40.3	+40.3	491
23	Plessey[1]	23	U.K.	177	-13.1	+ 0.7	168
24	ITT[1]	20	U.S.	166	-24.5	-24.5	*
25	Data General	25	U.S.	163	+ 3.8	+ 3.8	*

NM: Not meaningful *Not Available [1]Some figures based upon estimates
[2]Dp revenues include all activities [3]Figures for Europe include African revenues
[4]Dp revenues include photocopiers

ny's revenues stem from its local market. It has also been active in exploiting the American arena, as its four U.S. companies accounted for around 25% of its total 1983 revenues.

While Germany's Triumph-Adler dropped out of the Top 25 this year, its revenues still earned it a place (number 16) in the European-owned dp ranking. Its $131 million in sales were predominantly drawn from the small to medium-sized business sector of its home market, while its presence in Italy, France, and the U.K. benefited from money pumped in by parent company Volkswagen.

Number 17 is the fourth French software house to make the DATAMATION table, Groupe Services d'Informatique (GSI). While GSI's $127 million revenues were down 9% in dollar terms, its business grew by 5% in French francs. Software accounts for 95% of the company's sales, with hardware making up the remaining 5%.

Italy's top independent software house Finsiel of Rome fills the 18th slot, with revenues of $12 million. The company confines its business to Italy and showed an 8% growth rate in Italian lire for 1983.

In contrast, it was the European exposure of the U.K.'s leading software and services company, Scicon International, that helped put the firm at position 19. Its $123 million revenue reflected a sterling increase of 14%. Scicon International, a subsidiary of British Petroleum. was formed by the merger of Scicon Consultancy and Scicon Computer Services, and the acquisition of software houses SES in Germany and GFI in France. In fact, France contributed 37% of the company's revenues last year.

At the tail end of the Top 20 European table was the U.K.'s Racal Electronics. Its revenues of $112 million were gleaned from across Europe, although its U.K. operation brought in over half its sales. Racal, whose principal business is data communications products, is now trying to increase its offering in the office automation and expert systems markets.

While each of these European-owned companies is hoping to increase its share of the burgeoning European dp market, each also faces stiff competition from a growing number of strong foreign competitors. Ironically, the future success of many of these European hopefuls is now tied closer than ever to the performance of overseas firms.

LINKUP ROUTE TO SURVIVAL

European companies are finding the best way to survive is to link up with foreign firms in partnerships that offer access to new technologies or new markets. Industrial collaborations such as the agreements between Ericsson and Sperry, ICL and Mitel, Nixdorf and Auragen, and Philips and Control Data are evidence of the team-up trend. Between 1982 and 1983 some 200 cooperative agreements were signed by European companies in the electronics sector. Of these, 50% were with U.S. firms, 20% with the Japanese, and only around 18% with other European companies.

Last year, the most significant transatlantic linkup involved the U.S. telecommunications colossus AT&T International, which is going hell-for-leather to establish a European presence. Following

DP REV. WORLDWIDE FY 1983 (IN $ MIL.)	TOTAL REV. EUROPE FY 1983 (IN $ MIL.)	TOTAL REV. WORLDWIDE FY 1983 (IN $ MIL.)	% CHANGE TOTAL REV. WORLDWIDE FY 1982/3	TOTAL NET INCOME WORLDWIDE FY 1983 (IN $ MIL.)	% CHANGE TOTAL NET INCOME WORLDWIDE Y 1982/3	TOTAL WORLDWIDE EMPLOYEES	YEAR ENDING
35,603	10,758	40,180	+16.9	5,485	+ 24	369,545	Dec.
1,522	1,378	1,522	+22.9	−95	+116	26,000	Dec.
1,376	10,670	15,720	− 7.4	319	− 2	313,000	Sept.
1,637	1,996	2,460	− 0.4	194	+255	47,800	Dec.
4,272	1,075	4,272	+10.1	284	− 32	78,000	June
1,321	1,002	1,321	+ 1.5	60	+107	22,573	Sept.
4,000	977	4,390	+ 4.9	197	+ 67	64,000	Dec.
1,064	922	1,064	+13.1	27	+ 8	17,521	Dec.
1,149	8,757	16,205	+ 0.6	227	+ 40	343,000	Dec.
2,420	1,360	4,710	+10.7	432	+ 13	72,500	Oct.
2,800	1,194	5,076	− 8.9	118	− 47	77,493	Mar.
3,333	842	3,731	+ 5.8	288	+ 23	62,000	Dec.
3,500	830	4,583	+ 5.6	162	+ 5	55,858	Dec.
1,666	1,059	5,753	+ 4.8	231	− 15	93,514	Dec.
1,536	320	1,538	+32.7	152	+ 42	21,700	June
328	*	3,451	−16.6	*	*	65,000	Dec.
458	682	934	+33.0	*	*	19,318	Dec.
316	379	417	+ 5.6	*	*	8,471	Dec.
249	278	328	*	*	*	6,400	Mar.
*	*	*	*	*	*	*	Oct.
222	514	620	+ 5.3	49	+ 20	18,427	Mar.
778	181	778	+68.4	47	+557	6,600	Dec.
267	1,168	1,792	− 2.5	143	+ 3	40,872	Mar.
532	5,835	14,155	− 7.1	675	+ 2	278,000	Dec.
829	164	829	+ 2.9	*	*	15,400	Sept.

its 1982 stake in Irish telecom company Telectron and a joint venture on switching technology with Dutch giant Philips, AT&TI took 25% interest in Italy's Olivetti. This deal, which primarily covers office automation products, is designed to give both companies greater muscle against IBM, especially in Europe.

Japanese companies also regard cooperation with Europeans as the most effective means of entry to the local market. Most of Japan's direct sales operations in Europe are in the areas of components, micros, and consumer electronics. Meanwhile, Japanese mainframes are offered exclusively through local partners. Fujitsu, for example, has ties with ICL and Siemens, and Hitachi sells its systems through BASF and Olivetti.

European dp firms also exhibited a new spirit of Europeanism during 1983. The major mainframers in Europe—ICL, Siemens, and Bull—agreed to set up a joint research institute in West Germany to study advanced processing technologies and share the results of the work. This is the most ambitious industrial collaboration in European dp since the disastrous Unidata project of the early '70s.

These three companies, along with nine others including Nixdorf, Thomson, Olivetti, and Philips, also agreed to adhere to the open systems communications standards determined by the Geneva-based ISO. This move was ostensibly designed to be a counteroffensive to IBM's SNA.

European governments were also anxious to encourage local cooperation, particularly at the R&D level. The pilot phase of the Esprit research program got off the ground last year. Esprit projects will be backed by $1.5 billion from the EEC and industry. One of the most strategic pilot projects calls for the creation of an Esprit Information Exchange System (EIES). Set up by a consortium involving Bull, Olivetti, Siemens, GEC, and ICL, the EIES will link European R&D centers and universities for the exchange of information and ideas. The net will use ISO's standards to connect various types of systems at these sites.

National R&D efforts were also launched last year, starting with the U.K.'s Alvey scheme for research into new technologies. Similar projects in Germany and elsewhere are planned this year. Much of the collaboration focuses on developing new software techniques. This reflects the emphasis European and other manufacturers are putting on building up the local software industry. Europe's software market, which was worth around $9 billion in 1983, is growing at a rate of 11% per year.

The trend toward merging dp and communications was also more in evidence last year. As the traditional distinctions between office machines, word processors, micros, minis, and mainframes blurred, European dp firms continued to revamp their product lines to meet the new challenge. Introductions of PBXs, networking concepts, and on-line services based on new technologies like videotex peppered the industry's calendar last year.

This convergence also made dp companies more aware of what the national telecommunications authorities were doing. In the U.K., the government put its plans to privatize British Telecom on the back burner to avoid interfering with its election campaign. The U.K. PTT neverthe-

The business microcomputer boom has brought both prizes and pitfalls.

less emerged from the initial chaos of market liberalization as a strong competitor in both the dp and telecom sectors. In 1983, it began to offer micros, office systems, and various network services.

PTTS EYE U.K. WITH INTEREST

Other European PTTs, still enjoying their traditional monopolies, watched the U.K. developments with interest. Most of them expect the tide of liberalization to cross the Channel in the not too distant future. Users hope those tides will soon be rising.

Users across Europe have in fact become more critical of the policies of the national telecommunications authorities. The most restrictive PTT, the German Bundespost, continued to come under fire last year for its manipulative market practices, despite its ambitious work in setting up a national videotex system and a broadband network.

In France, the PTT is facing a major overhaul as a result of the government reorganization of the dp and telecom industry. A united Thomson and CIT Alcatel will spearhead the French telecom industry. On the dp front, the government revamp has finally resulted in the establishment of the Bull group. The cornerstone of French dp, Bull consists of CII-Honeywell Bull, Thomson's Sems subsidiary, CIT Alcatel's Transac arm, and the office systems and micro company R2E. This reorganization plus continuing stagnation in the French economy, bred uncertainty among buyers, so business picked up only slightly last year.

Across the Rhine in West Germany, the picture was brighter. German-based subsidiaries and local companies posted healthy revenue gains. The country's dp flagship Siemens, however, is now in some danger of losing its dominant position to the fast growing Nixdorf, whose 1983 worldwide revenues amounted to 76% of Siemens dp take.

In the U.K., business was also good. ICL, Britain's biggest dp vendor, chalked up an 18% increase in pounds sterling. The company seems to be on the road to recovery, although it still has a long way to go before it comes close to IBM's share of the U.K. market.

The U.K. leads the European microcomputer market. At the beginning of the year, there were no less than 100 different pc models being peddled in Britain. Micromania in other parts of Europe has been less intense. But now Germany, the second largest micro market, is rapidly catching up with the U.K.

The business microcomputer boom has brought both prizes and pitfalls. The IBM PC sold steadily but unspectacularly in Europe, while DEC's offerings didn't do as well as those of Apple and Commodore.

Now that business in Europe is picking up, the trend toward micros and communications products is also accelerating. This should open up opportunities for many dp firms doing business on European soil, giving some of the higher flyers a chance to soar into next year's Top 25.

"Would you care to be on my mailing list?"

CARTOON BY MIKE TWOHY

METHODOLOGY

Information for the European Top 25 was solicited through a questionnaire and followed up by independent research by DATAMATION and Logica. For the purposes of this survey, Europe includes Austria, Belgium, Denmark, Finland, France, West Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, and the U.K.

The survey definition of data processing includes the following equipment categories: data communications, peripherals, terminals, software and services, and maintenance and repair. Explicitly excluded are data transmission or "basic" service revenues from specialized common carriers, and standalone electronic and magnetic media for disk and tape drives. All peripherals that attach to a system are included. For computer-based manufacturing systems, like computer-controlled machine tools, only the computer and hardcopy output devices are included and not the machine tool itself.

The main ranking for each company was based on 1983 calendar year revenues (U.S. dollars) from European dp operations. Figures for companies whose fiscal year did not end December 1983 were adjusted using published quarterly figures or estimates. All other figures appearing in this survey relate to the companies' reported results of their fiscal year ending 1983. In the main table, all results have been converted to U.S. dollars, using OECD exchange rate statistics for the appropriate time period. An additional column showing growth rates in actual accounting currencies is included to compensate for the anomalies produced by fluctuating exchange rates.

The rank orders for 1982 are exactly the same as those published last year. Any inaccuracies in last year's table have been corrected and used to calculate the 1982 growth rates. Total revenue figures for Europe and worldwide refer to the parent company, where appropriate. When the parent company itself is not strongly involved in dp, the principal company has been considered as independent.

Several companies such as ITT and Plessey did not provide complete information for the survey, and estimates were therefore made on the basis of published information.

DATAMATION's European Top 25 survey was prepared by Logica, a London-based company that provides international market studies and reports to computer and telecommunications suppliers.